

# APPLICATION FOR CERTIFICATION 2023 Model Year

PART 1

PLEVT00.07NY

## APPLICATION FOR CERTIFICATION

### Part 1

## 2023 Model Year

**Durability Group**: PLEVEEVNNEV1

Evap. Family: Not Applicable

Test Group: PLEVT00.07NY

**Durability Group Description**: Battery Electric Vehicle

Test Group Description: LDT

#### **Application Standards**

Federal: Tier 3 Bin 0 California: LDT ZEV 50 states

#### **Vehicles Covered**

ENDURANCE (AWD, BEV) (50 state)

#### **Vehicle Tested:**

Charge Depletion Test #

PLEV10077084 UDDS PLEV10077085 HWY

#### **Range Test Procedure:**

The Multi-Cycle Range and Energy Consumption Test (MCT) SAE J1634 test procedure consists of four UDDS cycles and two HWFET cycles in a specified sequence including mid-test and end-of-test constant speed "depletion phases" Constant speed performed at 55 mph.

#### **Part 1 TABLE OF CONTENTS**

#### Section No.

**Title** 

#### 0.0 Cover page

1

#### 1.0 Correspondence and Communications

- 1.10 Mailing Information
- 1.20 Certification Information and Responsible official

#### 2.0 Confidential Information

- 2.10 Statement of confidentiality
- 2.20 Test vehicle selection
- 2.30 Test parameters
- 2.40 Vehicle Test Settings
- 2.50 Traction Control Settings
- 2.60 Test Instructions
- 2.70 Projected sale

#### 3.0 Facilities, Equipment, and Test Procedures

- 3.10 Test facility
- 3.20 Proving grounds
- 3.30 Equipment
- 3.40 Range test procedure
- 3.50 Regenerative braking
- 3.60 Battery and vehicle preconditioning procedure
- 3.70 Procedure to determine mass emissions of fuel fired heater
- 3.80 Test instructions

## 4.0 Test Group Description

- 5.0 Durability Group Description
- 6.0 Evaporative/Refueling Family
- 7.0 OBD System Description
- 8.0 AECD Description

#### 9.0 Maintenance

- 9.10 Test vehicle scheduled maintenance
- 9.20 Recommended customer maintenance schedule
- 9.30 Lubricants and heater fuels, if any

# 10.0 Vehicle Emission Control Information (VECI) and Fuel Economy and Environment Labels, Statements

- 10.10 VECI label locations
- 10.20 Sample VECI labels
- 10.30 Sample Fuel economy and environment label
- 10.40 Derived 5-cycle MPG and MCT calculations
- 10.50 Statement of compliance
- 10.60 Emission Testing Waiver Statement

#### 11.0 General technical description

- 11.10 Description of Propulsion System
- 11.20 Description of Motor(s)
- 11.30 Description of Batteries
  - 11.30.1 Battery charging capacity
  - 11.30.2 Self-discharge information
  - 11.30.3 Description of thermal management system
  - 11.30.4 Definition of end-of-life
  - 11.30.5 Description of battery disposal plan
- 11.40 Description of Controller/Inverter
- 11.50 Description of Transmission
- 11.60 Description of climate control system
  - 11.60.1 Electric Heat Pump- Electric cabin heater
  - 11.60.2 (Reserved)
  - 11.60.3 Climate control system logic
- 11.70 Description of Regenerative Braking System
  - 11.70.1 Control logic
  - 11.70.2 Percentage of braking performed on road by each axle
- 11.80 Description of on-board charger
  - 11.80.1 Power recharging procedures
  - 11.80.2 Power requirements necessary to recharge vehicle
- 11.90 Accessories which draw energy from the batteries
  - 11.90.1 Other unique features (e.g. solar panels)
  - 11.90.2 Description of warning system(s)
  - for maintenance/malfunction
- 11.90.3 Cut off terminal voltages for prevention of battery damage

#### 12.0 Starting and Shifting Schedules

- 12.1 Starting Procedure
- 12.2 Shifting Procedure

#### 13.0 Description of Vehicles Covered by Certification

#### 14.0 Additional Information

- 14.1 EPA filing Fee Form
- 14.2 Receipt

#### 15.0 EPA Certificate Summary Information Report

15.1 EPA Certification Summary Information Reports (CSI)

#### 16.0 Federal Requirements

- 16.1 Request for certificate COC
- 16.2 Request for certificate EO

#### 17.0 California ARB information

- 17.1 California Compliance Statements Production Vehicle same as Test Vehicle Statement
- 17.2 Labelling Durability Statement
- 17.3 Drivability Statement
- 17.4 Fill Pipe Specifications
- 17.5 Evaporative Emission Deterioration Program
- 17.6 Assembly line NMOG / NMHC Factor
- 17.7 Continuity of Emissions
- 17.8 Lubricants
- 17.9 Test Facility and Equipment
- 17.10 Diagnostic Procedures
- 17.11 Procedures for Evaluating Drivability

- 17.12 Alternate Procedure
- 17.13 Blanket Approval List
- 17.14 Fuel Economy and Environment Label
- 17.15 Projected Sales
- 17.16 Certification Short Test (CST), High Altitude Testing and Idle CO Testing
- 17.17 Method for Calculation of CO2 Equivalent Value & GHG score
- 17.18 Compliance Fee Final Invoice

## 18.0 Application Revisions

#### Communication

## **1.0** Correspondence and Communications

### 1.10 **Mailing Information**

Name and Address of the person to whom the Certificate and the Executive Order should be mailed:

Lordstown EV Corporation Darren Post VP of Engineering 38555 Hills Tech Drive Farmington Hills, MI 48331

Corporate Name and Address that should appear on the Certificate of Conformity and on the Executive Order

Lordstown EV Corporation 38555 Hills Tech Drive Farmington Hills, MI 48331



#### 2.0 Confidential Information

- 2.20 Test Vehicle Selection
- 2.30 Test Parameters
- 2.40 Vehicle Test Settings
- 2.50 Traction Control
- 2.60 Test Instructions
- 3.0 Facilities, Equipment, and Test Procedures
  - 3.10 **Test Facility:**
  - 3.20 **Proving Grounds:**
  - 3.30 Equipment:
  - 3.40 Range Test Procedure:
  - 3.50 Regenerative Braking:
  - 3.60 Battery and Vehicle Pre-Conditioning Procedures:
  - 3.70 Procedure to Determine Mass Emissions of Fuel Fired Heater

Not applicable since Fuel Fired Heater not offered for this vehicle by Lordstown Motors.

3.80 **Special Test Instructions:** 



- 1. Equipment
- 2. Safety warnings
- 3. Installation guide
- 4. Driver's guide for the Multi-Cycle Test (MCT)
- 5. Vehicle settings for the MCT
- 6. Uninstallation guide



Figure 1. Endurance running on a dynamometer



- 1. Lordstown will provide 2 Hioki current clamps (CT6846-05), 2 current clamp cable extenders (CT9902), 1 breakout box (made by Lordstown) with Hioki current clamp(CT6863-05), and 2 voltage probes (+,-) inside, 4 Hioki banana branch patch cords, and 1 Hioki Power Analyzer (PW3390).
- 2. One 10mm socket, one socket extender, and one rachet are required from the garage.

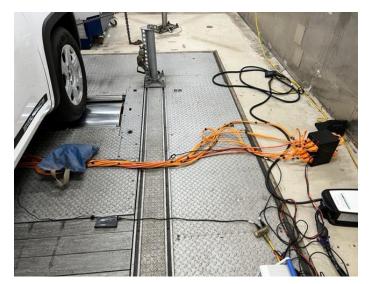


Figure 2. Breakout box and cables



Figure 3. Breakout box cables

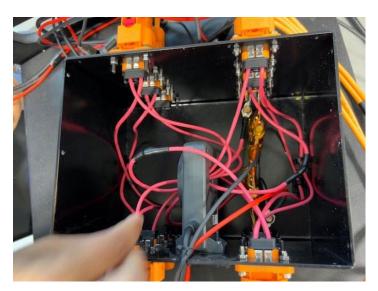


Figure 4. Inside of the Breakout box



- 3. Current clamps are used to measure the DC current output from the High Voltage (HV) battery to all 4 inverters. One clamp for the 2 front inverters and one clamp for the two rear inverters.
- 4. The breakout box measures the total DC current from the HV battery to DCDC (APM), AC compressor, Cabin Heater, Battery Heater, and On-Board Charging Module (OBCM). The breakout box also measures the voltage of the HV battery through the voltage probes inside.
- 5. The breakout box is needed because the positive and negative wires of each of those components are wrapped in one cable. The breakout box separates those cables into positive and negative wires. The current clamp inside the breakout box is clamped over all 5 positive wires with the current convention of negative current flow out of the battery to those components (discharge).
- 6. The current clamp inside the breakout box is integrated with the box and cannot be separated. In case a different clamp is needed for measurement, it will need to have a hinge that allows opening and close around the wires.
- 7. The voltage probes inside the breakout box are attached to the OBCM terminals.
- 8. Banana branch patch cords are used to jump HV battery voltage measured to other channels of the power analyzer.
- 9. The PW3390 Hioki Power Analyzer requires 30 mins to warm up.



- 1. People who will be performing the operations and procedures mentioned in this document should be properly trained and qualified for High Voltage vehicles.
- 2. Appropriate personal protection equipment (PPE) should be worn throughout the installation and uninstallation process.
- 3. Installation and uninstallation should only be done when the vehicle is completely shut off and the 12V battery disconnected.
- 4. Breakout box should stay closed throughout the test.
- 5. Cables and wires should be clear from the driver's entry and exit path of the vehicle.
- 6. Safety risks:
  - Electrocution
  - Electric shock
  - Burns
  - Loss of consciousness or loss of muscle control
  - Death



- 1. Installation environment
- 2. Setting up the Hioki Power Analyzer
- 3. Vehicle shutoff procedure and 12V battery disconnection
- 4. Installing the current clamps
- 5. Connecting the breakout box to the vehicle
- 6. Re-connecting the 12V battery and starting the vehicle



- 1. It is recommended to install the instruments after the vehicle has been tied down on the dyno to avoid moving the vehicle with breakout box cables hanging on the ground. However, this will require the installer to lay underneath the vehicle and complete the installation in a tight space.
- 2. If installing the instruments on the dyno is not feasible. Use wheel dollies to move the vehicle after instruments are installed and make sure no cables or connectors are scraping the floor.
- 3. The complete installation time is around 30 to 45 minutes if performed with the vehicle on the dyno.



Figure 5. Cables hanging on the floor after connection



## Page 1 of 3.

- 1. Turn the Hioki Power Analyzer at least 30 mins before the start of the test to let it warm up properly.
- 2. Connect each current clamp with a cable extender. Connect the other side of the extender to the power analyzer.
- 3. Connect the front current clamp to channel 1 and the rear current clamp to channel 2.
- 4. Connect the current sensor cable (12-pin) from the breakout box to channel 3. Connect the red and black voltage cables from the breakout box to the Hioki channel 3 banana adapters.
- 5. After Hioki is powered on. Hit the "O ADJ" button on the Hioki to conduct zero adjustments.
- 6. The desired Hioki measurement setting has been set to default; no adjustment is needed. (Refer to Pg.25 and 26 for specific settings.)
- 7. See the next page for a completed power analyzer connection.



Figure 6. Power analyzer and current clamps



Page 2 of 3.

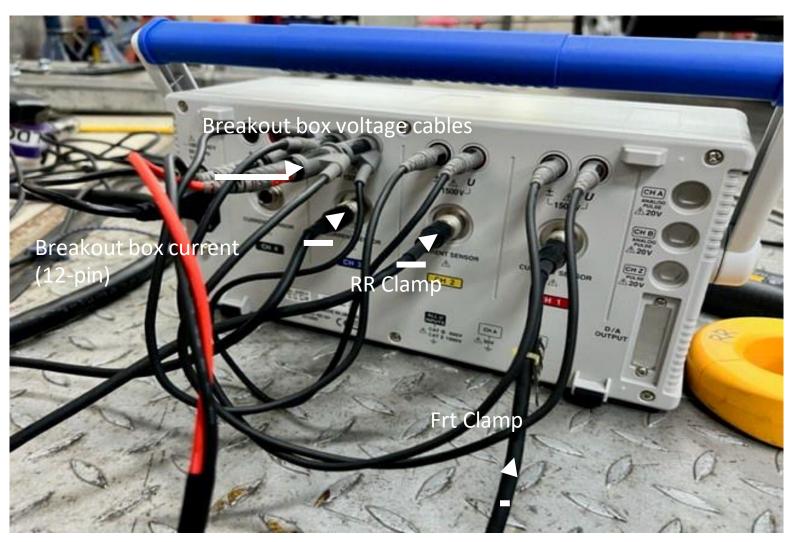


Figure 7. Power analyzer connection



## Page 3 of 3.

- 1. The complete Hioki Power Analyzer startup sequence is below:
  - Step 1: Turn on the power analyzer
  - Step 2: Go to the measurement screen
  - Step 3: Start zero adjustment
  - Step 4: Confirm zero adjustment
  - Step 5: Start recording data
- 2. Start/Stop button in green means the power analyzer is recording data.

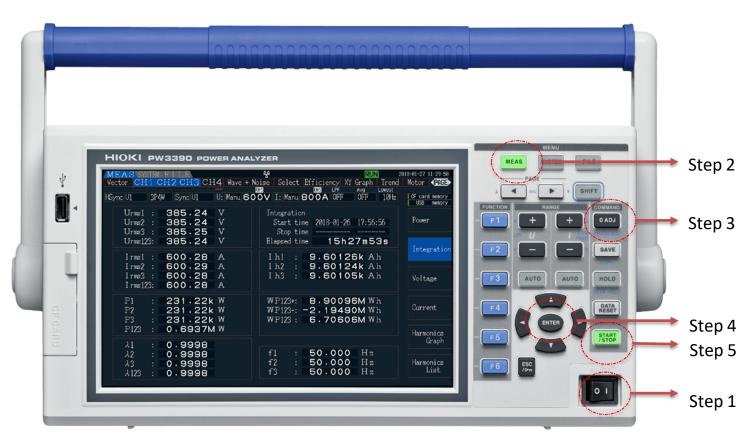


Figure 8. Power analyzer starting sequence



- 1. Open driver's door.
- Make sure the start/stop button light is off, if not, push it to turn off the vehicle.
- Pull the hood latch lever inside the cabin twice. This action will wake up the vehicle.
- Wait until the red light on the gear selector and the blue light on the cabin air recirculation are both turned off.
- Exit the vehicle and leave the driver's door open.
- Open the hood, there is no hood release latch outside the vehicle.
- Remove the 12V battery cover.
- Use a 10mm socket and ratchet to remove the positive cable. Slightly pull the positive cable out so it will not touch the terminal by accident.
- Now the vehicle is completely shut off and ready to install the current and voltage measuring instrument.



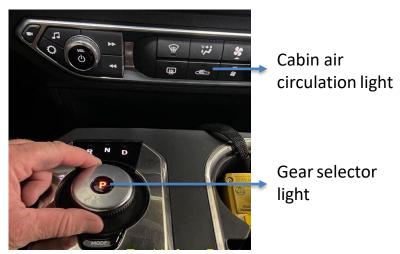




Figure 9. Hood latch lever

Figure 10. Gear selector and cabin air circulation lights

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Figure 11. 12V battery location



Attaching the current clamp on the HV battery to the front inverter cables.

- 1. Attach the current clamp on the two cables shown below. Blue arrows indicate which wires to clamp and the current convention during recharge. Matching the arrow on the clamp with a blue arrow will generate positive current readings during battery recharge.
- 2. Slide up the lock button on the side of the current clamp handle to lock the hinge.

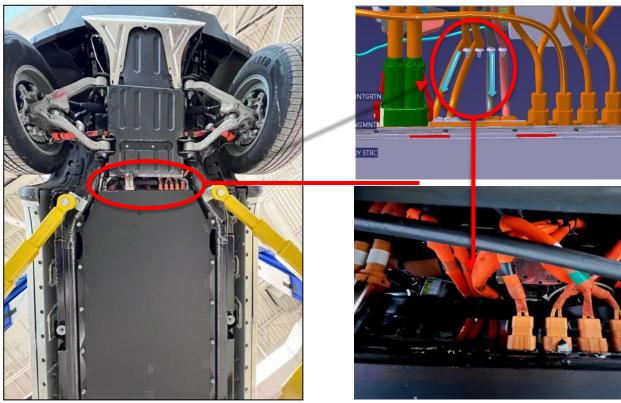


Figure 12. Location of the HV battery to front inverter cables



Figure 12. Cables to attach the front clamp

Figure 13. Clamp on the front cables



Attaching the current clamp on the HV battery to the rear inverter cables.

- 1. Attach the current clamp on the two cables shown below. Blue arrows indicate which wire to clamp and the current convention during recharge. Matching the arrow on the clamp with blue arrows will generate positive current readings during battery recharge.
- 2. Slide up the lock button on the side of the current clamp handle to lock the hinge.



Figure 12. Location of the HV battery to rear inverter cables

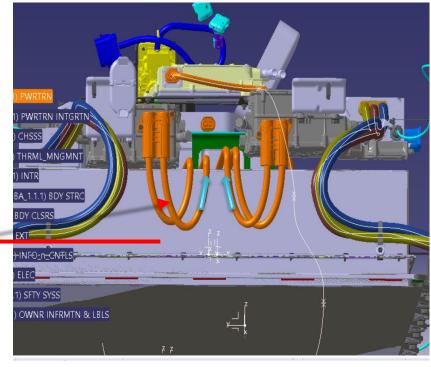


Figure 13. Cables to attach the rear clamp

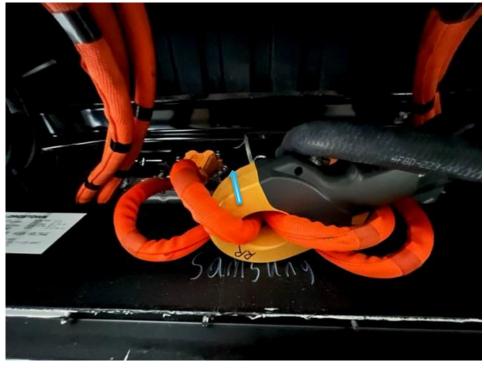
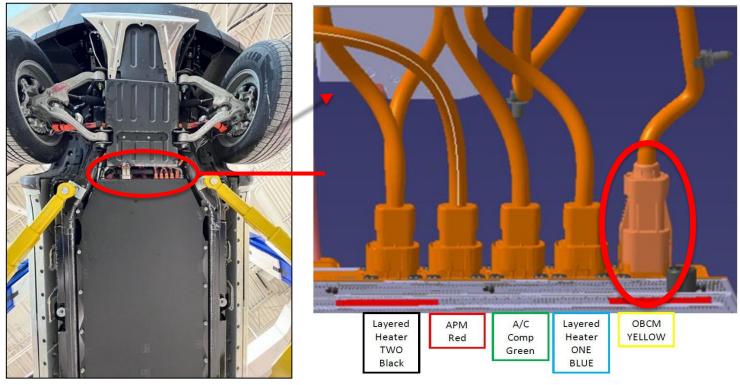


Figure 14. Clamp on the rear cables



## Page 1 of 4.

- 1. There are 5 HV auxiliary connectors that need to be disconnected from the HV battery and re-routed to the breakout box. They are located next to the front inverter cables.
- 2. First, disconnect the OBCM connector from the HV battery. Figure 17 shows the vehicle side OBCM female connector and the process of unplugging it. The red arrows show the direction to pull and press.



2. Press and pull

- First pull the red pin all the way back
- Then press here while pulling the connector out.

Figure 15. Location of the 5 HV auxiliary connectors

Figure 16. Description of each connectors

Figure 17. OBCM connector disconnection guide



## Page 2 of 4.

- 3. Connect the vehicle side female connector you just pulled out to the breakout box side OBCM male connector (yellow labeled). After they are connected, push in the red pin on the vehicle side female connector to secure the connection. (Figure 19)
- 4. Connect the breakout box side OBCM female connector to the vehicle HV battery side male connector. Push in the red pin on the breakout box side OBCM female connector to secure the connection.
- 5. Figure 18 shows all the male and female connectors from the breakout box.

- Breakout box side OBCM male connector.
- Breakout box side
   OBCM female
   connector.



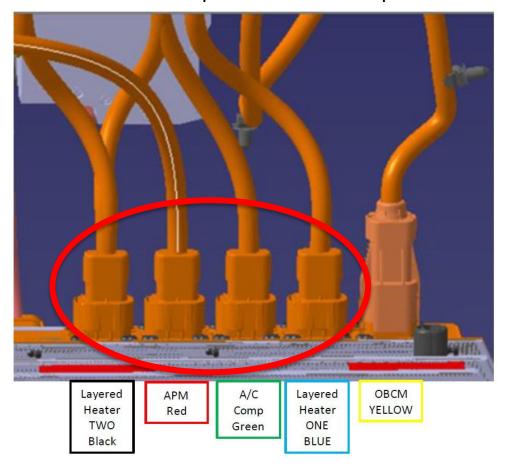
Push in to secure the connection (This picture is showing the pin already pushed in)

Figure 19. Red pin on the female connector



## Page 3 of 4.

6. Repeat the same process for the blue, green, red, and black connectors. The only difference is these female connectors do not need to be pressed when disconnecting. You only need to pull back the red pin before pulling the connector out and push back the red pin after the connection.



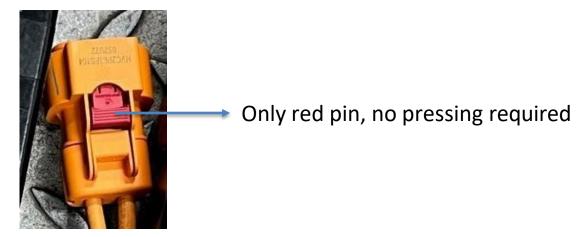


Figure 21. Female connector for DCDC, AC compressor, Cabin Heater, and Battery Heater

Figure 20. Description of each connectors



## Page 4 of 4.

7. Here is a picture showing the completed breakout box to vehicle connection.

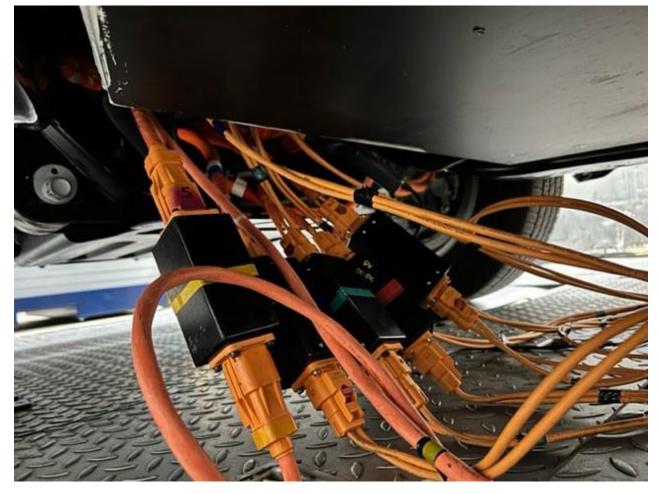


Figure 22. All break out box connectors connected to the vehicle



- 1. Re-attach the positive cable on the 12V battery positive terminal. Use the rachet to fasten the bolt to secure the connection.
- 2. Close the hood.



## Driving the MCT test

- 1. Run both constant speed sections of MCT at 55 mph.
- 2. End the first constant speed section after 3 hours 25 minutes (not including a soak in between). The vehicle should be at about 18% State of Charge.
- 3. Use cruise control for the first constant speed section (CSC1).
- 4. Do not use cruise control for the second constant speed section (CSC2). Cruise control is disabled at 10% SOC.
- 5. After the MCT test is finished, the vehicle will be immobilized with the parking brake on due to the battery being completely drained. It is recommended to fully recharge the vehicle on the dyno. If that is not feasible, use vehicle dollies on the two rear wheels to move the vehicle off the dyno and charge.



## Vehicle turn-on/off procedure

- 1. Endurance uses a regular transponder key fob.
- 2. Once inside, press the brake pedal and push the Start/Stop button to start the vehicle.
- 3. While pressing the brake pedal, rotate the gear selector to shift into Drive, Reverse, or Neutral. Press P to shift into Park. See figure 23 for the gear selector and parking brake location.
- 4. Parking brake automatically applies when the vehicle shifts into Park.
- 5. Parking brake button must be pressed every time the vehicle shifts out of Park to disengage the parking brake.
- 6. To shut off the vehicle (aka sleep mode), first shift into Park, then press the Start/Stop button to power off the vehicle.
- 7. Exit the vehicle, make sure all doors are closed, then hit the lock button on the key fob to lock the vehicle. The vehicle will then go into sleep mode.



Figure 23. Gear selector and parking brake



## Dyno Mode

1. Endurance does not require a Dyno mode to run on a dyno.

## Vehicle setting through the screen

1. No setting needs to be set or adjusted on the center touch screen.



All vehicle settings should be checked before the driver starts the dynamic sections or constant speed.

## 1. Light

- Turn the light switch knob (located on the left side of the steering column) to the location shown in the picture below, then turn counterclockwise slightly.
- Verify the front lights, daytime running lights, and orange marker lights are off.

#### 2. HVAC

- Push the "Fan Down" button until the fan is off.
- Make sure the A/C knob and the Max A/C button indication lights are off (no blue lights).



Figure 24. Exterior light control knob



Figure 25. Blower control buttons



Cruise Control for constant speed section 1.

- 1. The cruise control buttons are located on the left spoke of the steering wheel.
- 2. Press button No.1 to activate the cruise control.
- 3. Press button No.2 to set the cruise control speed. Press button No.2 or No.3 to speed up or slow down, respectively.
- 4. Press button No.1 or press on the brake pedal to deactivate the cruise control.



Figure 26. Cruise control buttons



## Charging

- 1. Charging can only start when the vehicle is unlocked and powered on (blue light showing on the Start/Stop button).
- 2. The charge port is located at the center of the front facia.
- 3. Push on the lid to open the charge port door and unplug the rubber protective covers.
- 4. With a charging cable inserted, the charge port light will illuminate depending on the status of the charge.

## Charge Port Light

- No LEDs illuminated when charging is not in progress.
- When the charge plug is connected to the vehicle, the charge port LEDs shall illuminate solid blue to indicate initialization is in progress.
- When the charge plug is connected to the vehicle and AC/DC charging has started, LEDs shall transition from solid blue to blinking blue to indicate charging is in progress.
- When charging is complete, LEDs shall be solid green to indicate charging is complete.
- Red LED will indicate a fault in the charging process.



Figure 27. Charging port and lights



## After the test is completed:

- 1. Hioki Power Analyzer: press the START/STOP button to stop recording.
- 2. Follow the same power off and 12V battery disconnecting procedure as mentioned in the installation procedure.
- 3. Detach the Hioki current clamps from the vehicle.
- 4. Disconnect the current clamps from the extension cords.
- 5. Disconnect the extension cords from the power analyzer.
- 6. Disconnect the breakout box female and male connectors from the vehicle.
- 7. Re-connect the 5 auxiliary vehicle male connectors back on the vehicle HV battery female connectors. Remember to push back in the red pin on the male connectors to secure the connection.
- 8. Re-connect the 12V battery positive wire and fasten the bolt.

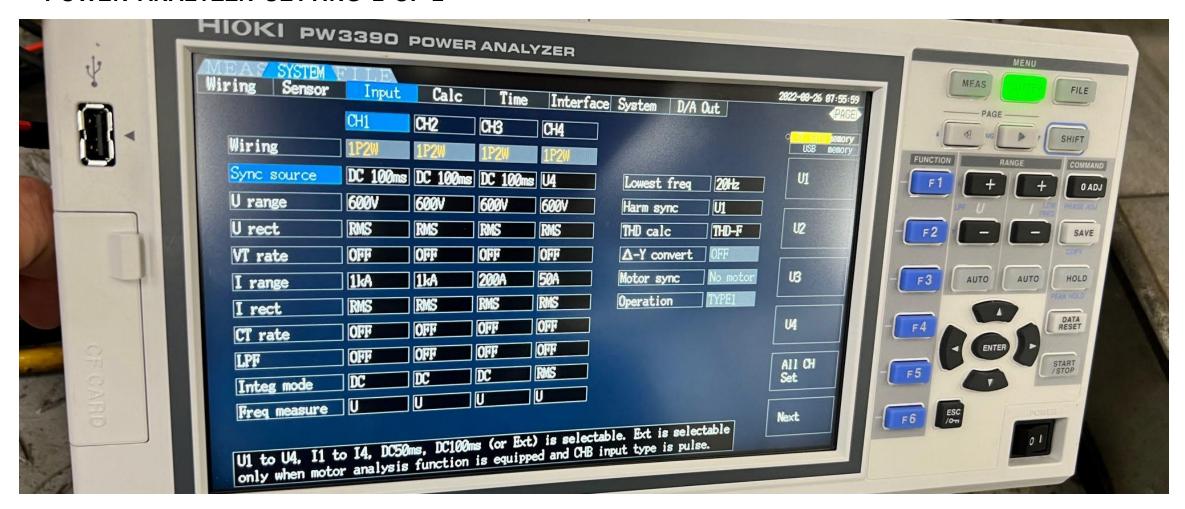


#### POWER ANALYZER SETTING 1 OF 2





#### POWER ANALYZER SETTING 2 OF 2



#### **4.0 Test Group Description**

#### 5.0 Durability Group Description

Durability Group Name: PBGREEVNNEV2

Combustion Cycle: N.A.

Engine Type: Electric Motors

Fuel Used: Electricity

Basic Fuel Metering System: N.A.

Catalyst Construction: N.A.

Battery Manufacture: Refer Section 11.30

Battery Chemistry: Refer Section 11.30

Battery Capacity: Refer Section 11.3.1

Battery Self Discharge Information: Refer Section 11.3.2

Battery Thermal System: Refer Section 11.3.3

Battery Disposal Plan: Refer Section 11.3.5

Battery Construction: Refer Section 11.30

**Durability Vehicle:** 

## 6.0 Evaporative/Refuelling Family

Not Applicable

## 7.0 OBD System Description

Not Applicable

## 8.0 AECD Description

Not Applicable

#### 9.0 Maintenance

#### 9.10 Test Vehicle Scheduled Maintenance:

Not applicable (same as "Recommended Customer Maintenance Schedule" in next section 9.20).

#### 9.20 Recommended Customer Maintenance Schedule

The Maintenance Schedules and the required maintenance intervals are located in the Owner's Manual and Warranty and Service Booklet.

#### 9.30 Lubricants and heater fuels, if any

Fuel Fired Heater is not applicable on this vehicle.

# 10.0 Vehicle Emission Control Information (VECI) and Fuel Economy and Environment Labels

#### 10.10 VECI Label Locations:

The Vehicle Emissions Control Information label (VECI) is on the hood's underside. Below is this vehicle's VECI label.

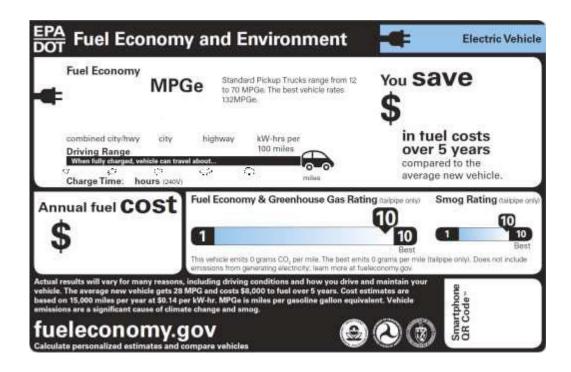
Label according to 40 CFR § 86.1807-01

#### 10.20 VECI Label



## 10.30 Fuel Economy and Environment Label

The Fuel Economy Label is installed on the driver side rear door window. The Monroney Label now includes the EPA/DOT Fuel Economy and Environment Section (GHG, Smog Rating) based on the template published by EPA in May 2011. See attachment for label template to be used for this vehicle (The real FE label for this vehicle is not available at this time). The California Environmental Performance Label will be included on the vehicle.



10.40 Derived 5-cycle MPG and MCT Calculations

**EPA EV Multicycle Calculator (SAE J1634 Oct 2012)** 

Manufacturer: Lordstown As used by EPA labatory

Carline:

Model Year 2023 D.Good March 8, 2016

Vehicle Endurance

**Test Number** 

Comments: 55mph constant with cruise control for SS1, road speed fan, 45 psi, 3rd UDDS starts at 18% SOC

Lab TRC Inc

**Test Date** 

						Recharge		
Cycle	Energy (Wh)	Distance (mi)	ECdc_cyc	Kuwgt	Kwgt	AC WattH	rs	
UDDS1	2944.81	7.43	396.34	99.09	11.45		<b>121273</b> Xhr,	min
UDDS2	2773.82	7.42	373.83	93.46	121.01			
UDDS3	2671.48	7.40	361.01	90.25	116.86			
UDDS4	2634.27	7.44	354.07	88.52	114.61			
HWY1	3976.74	10.28	386.84	193.42	<u>.</u>			
HWY2	3770.35	10.27	367.12	183.56	;			
SS1	75367.4	190.62	395.38					
SS2	7755.86	19.66	394.50					
TOTAL	101894.73	260.520						
K-Factors	UDDS1	UDDS2	UDDS3	UDDS4	HWY1	HWY2		
Unweighted	0.250	0.250	0.250	0.250	0.500	0.500		
Weighted	0.029	0.324	0.324	0.324	NA	NA		
							EPA version	n
Results	Range (mi)	4C Wh/mi	MPGe	kWh	/1(0mi		kWh/100	m
UDDSu	274.42	· ·			<u> </u>			
UDDSw	279.98	433.15	77.8142	43	3.3: 7		43.3147	1
HWY	270.29		75.1209		1.8 7		44.8676	
			/3.1203	4-	T.O /			_

#### 10.50 Statement of Compliance

This vehicle conforms to US EPA Tier 3 Bin 0 vehicle regulations applicable to 2023 model year new motor vehicles and to California regulations applicable to 2023 model year new ZEV light duty trucks.

Lordstown Motors states that in regard to the vehicle's control systems and all related parameters the production vehicles will be identical to the test vehicle that was used for certification testing.

The vehicles (BEV comply with all the requirements of § 86.1829-15 instead of submitting test data. Tailpipe emissions of regulated pollutants from vehicles powered solely by electricity are deemed to be zero.

Emission Compliance Statements (in lieu of conducting emission testing These BEV comply with all the testing requirements of Part 86, subpart S.

#### 10.60 Emission Testing Waiver Statement

# 10.70 Certification Short Test (CST), High Altitude Testing and Idle CO Testing Waiver Statement

### 11.0 General Technical Descriptions

## 11.10 Description of Propulsion System

The propulsion system consists of four in-wheel electric hub motors, a rear and front inverter, and a high-voltage battery pack.

## 11.20 Description of Motors

#### **Motors**

Four in-wheel electric hub motors, surface mounted permanent magnet with concentrated wire winding

# 11.30 Description of Battery

The vehicle is equipped with a liquid-cooled lithium-ion high voltage battery that is used to power the electric powertrain systems and the vehicle electrical system.

### 11.3.1 Battery Charging Capacity

Nominal Battery Capacity 315 Ah

### 11.3.2 Self-discharge information

### 11.3.3 Description of the thermal management system

#### 11.3.4 Definition of end-of-life

The battery end of life is described as approximately 70% remaining capacity Canters with proper inspection and test methods.

The battery is warranted for 8 years, 100 K miles (whichever occurs first).

#### 11.3.5 Description of the battery disposal plan

Lordstown Motors highly recommends that all battery packs be taken to Lordstown Motors service facilities so that they can be recycled in a safe and efficient manner. If disposing independently, without return to Lordstown Motors, then the owner must assume responsibility for recycling in a safe and legal manner. If an owner does assume this responsibility, Lordstown Motors recommends consulting with the appropriate local, state or federal authorities to determine the appropriate methods for disposal and recycling. Keep in mind that disposal regulations may vary dependent on location. All batteries removed from the vehicle will be collected by any dealer and recycled as per the manufacturer's instructions. As for defective lithium-ion batteries, they must be stored in fire-resistant containers, and then they can be transported to a designated recycling facility.

## 11.40 Description of Controller/Inverter

Inverter:

11.50 Description of Transmission

N/A

- 11.60 Description of climate control system
- 11.6.1 HV Heater + LV PTC cabin Heater
- 11.6.2 (Reserved)

### 11.6.3 Climate control system logic

The system has no automatic mode

For Manual modes, choose any combination of air direction to defrost, face, foot, or any combination.

Blower speed can be manually adjusted in speeds from 0% to 100%.

Recirculation can be chosen between 2 states: fresh air (fan only) and full recirculation.

There are 2 special manual modes:

Max cooling - blower speed is at maximum; airflow is user setup and recirculation is activated. The vehicle is cooling without limit (the minimum possible theoretical temperature on air vents is 5°C).

Defrost – blower speed is at maximum, airflow is defrosting + demister vents, the vehicle is heating + full recirculation of air.

## 11.70 Description of Regenerative Braking System

The Regenerative Braking System is a system that uses the generated mode of electric motors and allows energy recovery. Apart from extending vehicle range, the regenerative braking system also causes less wear on hydraulic brake pads and discs.

### 11.7.1 Control logic

The vehicle is equipped with a regenerative braking system in which the regenerative braking energy is captured and stored back into the battery pack when decelerating.

# 11.7.2 Percentage of braking performed on road by each axle

## 11.80 Description of the on-board charger

#### 11.80.1 **Power recharging procedures**

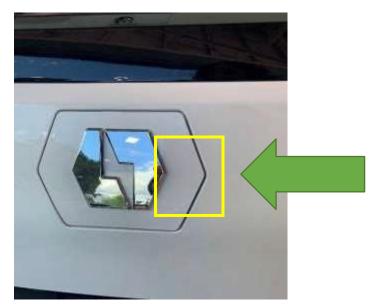
#### **Charging socket**

The charging socket is located on the front of the vehicle. The charging socket is allowing the vehicle to be AC and DC charged.

The charging socket is covered by a charging lid. The charging lid is a mechanical door that when closed prevents water, dirt, or unwanted access to the charging socket.

To open the charging lid to gain access to the charging socket user must push the charging lid door with most of the pressure on the right side of the door.

Closing is also done manually by closing the lid and pressing the right side of the flap until "click" (green arrow).



There is an additional protective cover over the charging socket to protect the socket from water and dirt.

To charge the vehicle, the user must plug in the cable to the charging socket.

While the cable is in the charging socket the vehicle powertrain cannot be engaged and no other gear than P can be selected.

The charging socket can detect a cable that is connected even if the cable is not connected to the working outlet on the other end.

#### To start normal charging:

- 1. Set the P (Park) position switch to place the vehicle in the park position and apply the parking brake.
- 2. Open the charge port lid of the vehicle.
- 3. Connect the charger connector (available in the trunk) to the charge port.
- 4. Connect the power plug to the mains electricity.

The LED on the charger cable notifies the correct functioning of the product and warns of any faults.

- Red light: Fault
- Blinking blue light: charge
- Solid Blue light: charge completed, maintenance.

During charging, the sophisticated dynamic protection system prevents overheating and short circuits, for guaranteed safety.

#### To stop normal charging:

- When the car is completely charged, remove the charge connector from the charge port.
- Properly store the charger in the bag in the frunk.
- Install the rubber protective covers.
- Close the charge port lid.

#### **Charging settings**

While the vehicle is charging user is presented with the charging screen on the central display showing the state of charge percentage.

# 11.80.2 **Power requirements necessary to recharge the vehicle**

Level 1 (110V/15A) = <15 hr.

Level 2 (220V/30A) = <6 hr.

Level 2 (220V/50A) = <5 hr.

150kW: <45Min

All charging time estimation are performed, (20-80)% of our HV Battery Pack.

# 11.90 Accessories that draw energy from the batteries

11.9.1 Other unique features (e.g. solar panels)

Not Available

# 11.9.2 **Description of warning system(s) for maintenance/malfunction**

## 11.9.3 Cut off terminal voltages to prevent battery damage

The control electronics inside of the Power Distribution Unit are programmed not to allow the voltage of the battery above or below voltage limits.

## 12.0 Starting and Shifting Schedules

## 12.1 Starting Procedure

## 12.2 Shifting Procedure

This vehicle uses a rotary dial to select transmission direction (choose "D" for Drive or "R" for Reverse) and since the vehicle does not have a gearbox, there is no shift schedule.

# 13.0 Description of Vehicles Covered by Certification

## 14.0 Additional Information

# 14.1 EPA filing Fee Form

## **US EPA Fee Form**

Help and EPA Instructions

\* Required Field

General Information	
Date: 09/26/2022	
Process Code *	
Submit New Fee Filing Form	*
Manufacturer Code *	
LEV	
Manufacturer Name *	
Lordstown EV Corporation	
Contact Name *	
Tieara McPherson	
Contact Email Address *	Contact Phone *
Tieara.McPherson@lordstownmotors.com	(228) 249-1566
Calendar Year complete application submitted to EPA *	
2022	
PLEASE NOTE: These fees apply to complete ce	estification applications resolved by EDA from

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2022, through December 31, 2022. The applicable fee is determined by the calendar year in which the complete certification application is received, not the model year.

Engine Family / Evaporative Family / Test Group

PLEVT00.07NY
Certificate Request Type (Industry Sector Code)
Certificate Request Type *
On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
On-Highway HDE Dyno Cert (Federal) (E, H)
On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
On-Highway Motorcycle (C)
On-Highway HDV Evap (F)
On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
On-Highway HDE Dyno Cert (California-Only) (E, H)
Nonroad CI (L)
Nonroad SI (B, S)
Cocomotive (G, K)
All Nonroad Recreational, excluding Marine engines (X, Y)
All Marine (Including IMO) (M, N, W)
Component Certification for Evaporative Emissions (P)
IMO Name (Required for dual US/IMO Marine Only)
ICI VIN Number (Required for ICIs Only)
Do you qualify for a Reduced Fee? *
No
Payment Information
Amount Owed
\$28,445.00

Payment Type *		
Offline ACH	*	

Comments

Pay.gov Tracking ID: 271PSMIO

EPA Form Number 3520-29 OMB Control No. 2060-0545 Approval expires 12/31/2022

The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).

15.0	EPA	Certificate	Summary	Information	Report

#### Date: 10/17/2022 07:44:27 PM

#### **Certification Summary Information Report**

Manufacturer	Lordstown EV Corporation	Manufacturer Code	LEV
Test Group	PLEVT00.07NY	Evaporative/Refueling Family	
Certificate Number		CARB Executive Order #	
Certificate Issue Date		Certificate Revision Date	
Certificate Effective Date		Conditional Certificate	
CSI Revision #		CSI Submission/Revision Date	10/17/2022 07:44:25 PM
Model Year	2023		

**Test Group Information** 

CSI Type Update for Correction **Running Change Reference Number** 

Small Business Administration Exemption **GHG Exempt Status** 

**Drive Sources and Fuel(s)** 

**Drive Source #1:** Electric Motor

Fu	iel	<b>Basic Fuel Metering System</b>	Lean Burn Strateg	ategy Indicator	
Electi	ricity	<u></u>			
Hybrid Indicator	No				
Multiple Fuel Storage		Rechargeable Energy Sto	orage System Indicator	Yes	
Multiple Fuel Combustion		Off-board Charge Capal	ole Indicator	Yes	
Fuel Cell Indicator	No	<b>EPA Vehicle Class</b>		LDT4	
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehic	cle Standard	ZEV	
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero I	Emissions Vehicle Indicator	No	
<b>Durability Group Name</b>	NBGREEVNNEV2	Durability Group Equiva	alency Factor	0.1	
Reduced Fee Test Group	No	Certification Region Cod	le(s)	FA, CA	
Complies with HD GHG 2b/3 regulations?	No				
Introduction into Commerce Date	10/27/2022	CAP2000 Conditional Co	ertificate?	N/A	
Independent Commercial Importer?		Alternative Fuel Convert	ter Certificate?		
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite	CO Option		
SFTP LEV-III Composite Compliance Indicator	No				
OBD Compliance Type	CARB	OBD Demonstration Veh	nicle Test Group	PLEVT00.07NY	
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group C	OBD Deficiencies	0	
OBD Deficiencies Comments	OBD information is placeho	older, OBD not required for Electric vehicles			
Mfr Test Group Comments					
Mfr Exhaust / Evap Standards Comments					

#### Date: 10/17/2022 07:44:27 PM Certification Summary Information Report

Test Group		PLEVT00.07NY		Evaporative/Refueling	g Family				
<b>Models Covered by</b>	this Certificate								
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - T	Гуре	- # of Gears	Tran	s - Lockup
Lordstown EV Corporation	1 - Lordstown EV Corporation	2 - Endurance	Federal	4-Wheel Drive	Automa	ıtic	1		No
Lordstown EV Corporation	1 - Lordstown EV Corporation	2 - Endurance	California + CAA Section 177 states	4-Wheel Drive	Automa	ıtic	1		No
Engine Description									
Hybrid Type				<b>Hybrid Description</b>					
Engine Type				Mfr Engine Descriptio	on				
Engine Block Arrangem	ent			Mfr Engine Block Arr	angement Desc	ription			
Camless Valvetrain Indicator Oil Viscosity/Classification									
Number of Cylinders/Ro	tors			Mechanically Variable	e Compression	Ratio Indicato	r		
After Treatment De	evice(s) (ATD)								
Mfr After Treatment D Comments	evice (ATD)								
<b>Direct Ozone Reduction</b>	(DOR) Device								
Mfr Emission Control I	Device Comments								
Official Test Number	ers								
Test Group Fuel	FTP (	JS06 SC03	3 Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity									
Official Charge Depleting Test Numbers									
Test Gro	•		DDS	Di	Highway				
Electr	ncity	PLEV	10077084	PI	LEV10077085				

Date: 10/17/2022 07:44:27 PM

Test Group	PLEVT00.07NY	Evaporative/Refueling Family	
Hybrid Electric Vehicle And Fuel Cell	Information		
Rechargable Energy Storage System	Battery(s)	Rechargable Energy Storage System, if Other	
Battery Type	Lithium Ion	<b>Number of Battery Packs</b>	1
Total Voltage of Battery Packs	348	Battery Energy Capacity	315
Battery Specific Energy	151.4	Battery Charger Type	On-Board
Number of Capacitors		Capacitor Rating (In Farads)	
Mfr Capacitor Comments			
Hydraulic System Description			
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	<b>Driver Controlled Regenerative Braking</b>	Yes
Mfr Regenerative Braking Description			
Drive Motor(s)/Generator(s)	4		
Motor/Generator Type 1	AC Induction	Rated Motor/Generator Power	96
Motor/Generator Type 2	AC Induction	Rated Motor/Generator Power	96
Motor/Generator Type 3	AC Induction	Rated Motor/Generator Power	96
Motor/Generator Type 4	AC Induction	Rated Motor/Generator Power	96
Mfr Fuel Cell Description			
Fuel Cell On-Board H2 Storage Capacity (kg)		Usable H2 Fill Capacity (kg)	
Mfr Hybrid Electric/ Electric Vehicle		• • •	
Comments			

Test Group		PLEVT00	0.07NY		Evaporative/R	efueling Family		
<b>Emission Data Vehi</b>	cle Informa	tion						
Vehicle ID / Configuration	on	PPV-51 /	0		Manufacturer	Vehicle Configurat	ion Number	0
Original Test Group Na		PLEVT00	).07NY			orative/Refueling F		
Original Test Vehicle M		2023						
Vehicle Model								
Represented Test Vehicl	e Make	Lordstow	n Motors		Represented Test Vehicle Model			Endurance
Leak Family Details	<b>;</b>							
Leak Family Identifier					Leak Family N	lame		
Drive Sources and Fuel System Details								
	Drive	Source and Fuel#		D iv	e Source		Fuel	
		1			ric Motor		Electric y	7
<b>Hybrid Indicator</b>		No						
Multiple Fuel Storage			<b>Multiple Fuel Combustion</b>					
Fuel Cell Indicator	No		Rechargeable Energy Storage System Indicator			Yes		
Rechargeable Energy St		Battery(s)	)		Rechargeable	Energy Storage Sys	tem, if 'Other'	
Off-board charge Capab		Yes						
<b>Odometer Correction</b>	Initial	430			Odometer Cor	rection Factor		0
Odometer Correction Si	_	+ = Syste	m Miles is equal to	Test odometer rea	ding * Correction	factor) + Initial system	em miles	
Odometer Correction Un	nits	Kilomete	rs .					
Engine Code		1			Rated Horsepo	ower		600
Displacement (liters)		0.01						
<b>Air Aspiration Method</b>		Naturally	Aspirated		Air Aspiration	Method, if 'Other'		
Number of Air Aspiration	on Devices				Air Aspiration Device Configuration			
Charge Air Cooler Type					Drive Mode While Testing		4-Wheel Drive	
Shift Indicator Light Us	age	Not eqipp	ed		Aged Emission Components		4,000 (mi)	
Curb Weight (lbs)		6450	6450		Equivalent Test Weight (pounds)		6500	
GVWR (lbs)					N/V Ratio		10.1	
Axle Ratio		1						
Transmission Type		Automati	c		# of Transmission Gears		1	
Transmission Lockup		No			Creeper Gear		No	
<b>Dynamometer Coef</b>	ficients:							
		Target Coefficient	s		Set Coefficients			
Coefficient							EPA Calculated	<b>Total Road Load Horse Power for</b>
Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	City/H	ighway/Evap Coefficients
City/Highway/Evap	49.74	0.2019	0.0368	-16.9	0.0378	0.03641		20.2

**Emission Control Device Comments** 

Date: 10/17/2022 07:44:27 PM

Engine Displacement 0.01 is a placeholder, EV displacement 0.00

Page 5 of 11 CSI Submission/Revision Date: 10/17/2022 07:44:25 PM

#### Date: 10/17/2022 07:44:27 PM

#### **Certification Summary Information Report**

Test Group	PLEVT00.07NY	Evaporative/Refueling Family					
Manufacturer Test Vehicle Comments	Transmission data is a placeholders, hub motors. Vehicle tested at an ETW of 6710, higher than required, enabling the range to be more representative in actual use.						
Test #	PLEV10077084	Test Procedure	81 - Charge Depleting UDDS				
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity				
Test Date	09/02/2022	Fuel	N/A				
Fuel Batch ID		Fuel Calibration Number					
Vehicle Class	N/A	DF Type	Mfr. Assigned				
Verify Test Lab ID	Transportation Research Center						
E10 Evaporative Test Measurement Method							
Test Start Odometer Reading	4444	Odometer Units	K				
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage					
State of Charge Delta	Yes						
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No				
PHEV/EV Charge Depleting Test In	formation						
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	121.273				
Charge Depleting Range (Calculated miles)	279.98	Charge Depleting Range (Actual miles)	279.98				
All Electric Range Unadjusted (miles)		Derived 5-Cycle Coefficient Model Year					
Equivalent All Electric Range (miles)	279.98	·					
Number of Charge Depleting Bags/Phases Conducted	1	Transition Bag/Phase Number					
Charge Depleting Bag/Phase							

#### Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Carbon dioxide	0
2	Carbon-Related Exhaust Emissions	0.01
3	Drive Trace Absolute Speed Change Rating	99.99
4	Drive Trace Energy Economy Rating	99.99
5	Drive Trace Inertia Work Ratio Rating	99.99
6	Manufacturer Fuel Economy	77.8142
7	System End State of Charge Watt-hours	0
8	System Start State of Charge Watt-hours	0

#### **Manufacturer Test Comments**

Comment both UDDS and HW tests (test procedure 81 and 84)were actually conducted as the multicycle (MCT) test according to the SAE J1634 test procedure 2012, constant speed @ 55 mph. The constant steady speed operation was performed at 55 mph. The Pre-charge energy from depletion to 99.9% SOC: 121.250 KWH. Number of bags/ phases set to 1 as a placeholder, Recharge AC Watt Hours 121,273 DC energy consumption UDDS1=396.3 Wh/mi; UDDS2 373.8 Wh/mi; UDDS3 361.0 Wh/mi; UDDS4 354.1 Wh/mi; UDDS weighted = 363.9 Wh/mi; UDDS1 DC discharge energy 2944.8 Wh; MCT UBE energy 101894.7 Wh

#### Date: 10/17/2022 07:44:27 PM

#### **Certification Summary Information Report**

Test Group	PLEVT00.07NY	Evaporative/Refueling Family		
Test #	PLEV10077085	Test Procedure	84 - Charge Depleting Highway	
Exhaust Test # for this Evap Test		Test Fuel Type	62 - Electricity	
Test Date	09/02/2022	Fuel	N/A	
Fuel Batch ID		Fuel Calibration Number		
Vehicle Class	N/A	DF Type	Mfr. Assigned	
Verify Test Lab ID	Transportation Research Center			
E10 Evaporative Test Measurement Method				
<b>Test Start Odometer Reading</b>	7307	<b>Odometer Units</b>	K	
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage		
State of Charge Delta	Yes			
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No	
PHEV/EV Charge Depleting Test Inf	Cormation			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	121.273	
Charge Depleting Range (Calculated miles)	270.29	Charge Depleting Range (Actual miles)	270.29	
All Electric Range Unadjusted (miles)		Derived 5-Cycle Coefficient Model Year		
<b>Equivalent All Electric Range (miles)</b>	270.29			
Number of Charge Depleting Bags/Phases Conducted	1	Transition Bag/Phase Number		

#### **Charge Depleting Bag/Phase**

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result
1	Carbon dioxide	0
2	Carbon-Related Exhaust Emissions	0.01
3	Drive Trace Absolute Speed Change Rating	99.99
4	Drive Trace Energy Economy Rating	99.99
5	Drive Trace Inertia Work Ratio Rating	99.99
6	Manufacturer Fuel Economy	75.1207
7	System End State of Charge Watt-hours	0
8	System Start State of Charge Watt-hours	0

#### **Manufacturer Test Comments**

Comment both UDDS and HW tests (test procedure 81 and 84) were actually conducted as the multicycle (MCT) test according to the SAE J1634 test procedure 2012. The constant steady speed operation was performed at 55 mph. The Pre-charge energy from depletion to 99.9% SOC: 121.250 KWH. Number of bags/ phases set to 1 as a placeholder, Recharge AC Watt Hours 121273 DC energy consumption HWFE1= 386.84 Wh/mi; HWFE average= 376.9 Wh/mi

#### **Fuel Properties**

Test Group	PLI	EVT00.07NY			tive/Refueling Fam	ily			
			Consolid	ated List of St	andards				
Exhaust Standard	s								
Cert Region	Fed	eral		Cert/In-	U <b>se Code</b>		Cer	t	
Vehicle Class	LD	LDV/Passenger Car			l Level		Fed	eral Tier 3 Bin 0	
Fuel		ctricity		Test Pro	cedure			arge Depleting Hig	hway
		J				Downward			J
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO							0	0
150,000 miles	MFR FE								0
Cert Region	Fed	eral		Cert/In-	Use Code		Cer	t	
Vehicle Class	LD	V/Passenger Car		Standard	l Level		Fed	eral Tier 3 Bin 0	
Fuel	Ele	ctricity		Test Pro	cedure		Cha	arge Depleting UD	DS
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO				ractor		Viuit Dr	0	0
150,000 miles	MFR FE								0
130,000 IIIICS	WIRE								0
Cert Region	Cal	ifornia + CAA Section	n 177 states	Cert/In-	Use Code		Cer	t	
Vehicle Class	LD	V/Passenger Car		Standard				ifornia ZEV	
Fuel		ctricity		Test Pro				arge Depleting UD	DS
		<b>.</b>				Downward		8 1 8	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	СО							0	0
150,000 miles	MFR FE								0
Cert Region		eral		Cert/In-			Cer		
Vehicle Class	LDV/Passenger Car			Standard Level			Federal Tier 3 Bin 0		
Fuel	Ele	ctricity		Test Pro	cedure		Col	d CO	
	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
Useful Life	Elilission Ivallie	Nesun	14.11	1111111	I uctor		Triule DI	IIIII DI	Dea

#### Date: 10/17/2022 07:44:27 PM

# **Certification Summary Information Report**

PLE	VT00.07NY		<b>Evaporative/Refueling Family</b>					
Calif	California + CAA Section 177 states		Cert/In-Use Code		Cer	t		
LDV	/Passenger Car		Standard Level		California ZEV			
Elect	ricity		Test Procedure		Charge Depleting Highway			
Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
CO							0	0
MFR FE								0
	Calif LDV Elect <b>Emission Name</b> CO	LDV/Passenger Car Electricity  Rounded Result CO	California + CAA Section 177 states LDV/Passenger Car Electricity  Rounded Result RAF CO	California + CAA Section 177 states LDV/Passenger Car Electricity  Rounded Result RAF NMHC CO	California + CAA Section 177 states  LDV/Passenger Car  Electricity  Rounded Result RAF  NMOG / NMHC Factor  CO   CO  CO  CO  CO  CO  C	California + CAA Section 177 states LDV/Passenger Car Electricity  Test Procedure  Rounded Result RAF NMOG / NMHC Factor  CO	California + CAA Section 177 states  LDV/Passenger Car Electricity  Test Procedure  California + CAA Section 177 states  Standard Level California + CAA Section 177 states  Chad	California + CAA Section 177 states LDV/Passenger Car Electricity  Test Procedure  California ZEV Charge Depleting Hig  LDV/Passenger Car Electricity  Test Procedure  Charge Depleting Hig  LDV/Passenger Car California ZEV Charge Depleting Hig  LDV/Passenger Car Charge De

Test Group	PLEVT00.07NY	Evaporative/Refueling	g Family
	Gle	ossary	
Useful Life			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
Emission Name			
HC-TOTAL	Total Hydrocarbon	METHANOL	CH3OH - Methanol
CO	Carbon Monoxide	N2O	Nitrous Oxide
CO2	Carbon dioxide	SPITBACK	Spitback Hydrocarbon in grams
CREE	Carbon-Related Exhaust Emissions	AMP-HRS	Integrated Amp-hours
OPT-CREE	Optional Carbon-Related Exhaust Emissions	START-SOC	System Start State of Charge Watt-hours
NOX	Nitrogen Oxide	END-SOC	System End State of Charge Watt-hours
PM	Particulate Matter	ACT-DISTANCE	Actual Distance Driven (miles)
PM-COMP	SFTP Composite Particulate Matter	AS-VOLT	Average System Voltage
HC-NM	Non-methane Hydrocarbon	CO2 BAG 1	Bag 1 Carbon Dioxide
OMHCE	Organic material Hydrocarbon Equivalent	CO2 BAG 2	Bag 2 Carbon Dioxide
OMNMHCE	Organic material non-methane HC equivalent	CO2 BAG 3	Bag 3 Carbon Dioxide
NMOG	Non-methane organic gases	CO2 BAG 4	Bag 4 Carbon Dioxide
НСНО	Formaldehyde	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
Н3С2НО	Acetaldehyde	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	DT-ASCR	Drive Trace Absolute Speed Change Rating
CO-COMP	SFTP Composite Carbon Monoxide	DT-EER	Drive Trace Energy Economy Rating
ETHANOL	C2H5OH - Ethanol	COMB-CREE	Combined Carbon-Related Exhaust Emissions
FE BAG 1	Bag 1 Fuel Economy	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
FE BAG 2	Bag 2 Fuel Economy	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
FE BAG 3	Bag 3 Fuel Economy	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
FE BAG 4	Bag 4 Fuel Economy	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
MFR FE	Manufacturer Fuel Economy	LEAK-DIA	Effective Leak Diameter (inches)
HC	Hydrocarbon for Running Loss and ORVR	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
METHANE	CH4 - Methane	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Star	ndard Level		
B1	Federal Tier 2 Bin 1	L3ULEV340	California LEV-III ULEV340
B2	Federal Tier 2 Bin 2	L3ULEV250	California LEV-III ULEV250
В3	Federal Tier 2 Bin 3	L3ULEV200	California LEV-III ULEV200
B4	Federal Tier 2 Bin 4	L3SULEV170	California LEV-III SULEV170
B5	Federal Tier 2 Bin 5	L3SULEV150	California LEV-III SULEV150

Page 10 of 11 CSI Submission/Revision Date: 10/17/2022 07:44:25 PM

Test Group	PLEVT00.07NY	Evaporative/Refueling Family		
B6	Federal Tier 2 Bin 6	L3LEV630	California LEV-III LEV630	
В7	Federal Tier 2 Bin 7	L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8	L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9	L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10	L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11	L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV	T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional	T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV	T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV	T3B50	Federal Tier 3 Bin 50	
OT	Other	T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1	T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV	T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30	HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395	HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340	HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630	HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570	HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70	HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50	HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30	HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20	HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395	HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
Transmission Type (	Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual	
A	Automatic	OT	Other	
AM	Automated Manual	SA	Semi-Automatic	
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)	
Drive System Code				
4	4-Wheel Drive	P	Part-time 4-Wheel Drive	
F	2-Wheel Drive, Front	A	All Wheel Drive	
R	2-Wheel Drive, Rear			

# Date: 10/17/2022 07:44:27 PM Certification Summary Information Report

<b>Test Group</b>	PLEVT00.07NY	Evaporative/Re	Evaporative/Refueling Family			
Additional Terms a	and Acronyms					
AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer			
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery			
DF	Deterioration Factor	SIL	Shift Indicator Light			
Evap	Evaporation, Evaporative	Trans	Transmission			

# 16.0 Federal Requirements

16.1 Request for COC



Mr. David Wright
Certification Division Mobil Source Pollution Control
U.S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan
48105

David Baker Lordstown Motors, Corp. 38555 Hills Tech Drive Farmington Hills, MI 48331

September 22, 2022

Dear Mr. Wright,

Subject: Request for Certificate of Conformity – Lordstown Motors 2023 Test Group PLEVT00.07NY

Lordstown Motors, Corp. requests that EPA issue a certificate of conformity for the subject test group. Attached is the Part 1 Application for Certification for the 2023 model year battery electric powered light-duty trucks (LDT4) contained in Lordstown Motors 50 state (Federal/CA) test group.

Lordstown Motors believes that the test group complies with all applicable regulations contained within 40 C.F.R. Parts 85, 86, and 600 and the applicable California Amendments of the EPA regulations it has incorporated and Title 13 of the California Code of Regulations. This test group complies with Federal Tier 3 Bin 0 and California ZEV.

Lordstown Motors wishes to obtain a conditional certificate of conformity (COC) under the provisions of 86.1835-01 (d).

The ARB executive order for this test group will be forwarded to you when it becomes available.

Your timely review and issuance of the certificate will be greatly appreciated.

Sincerely,

David Baker, Director

DSBaken.

# 16.2 Request for EO



Mr. Allen Lyons, Chief Emissions Compliance, Automotive Regulations and Science Division 9480 Telstar Avenue, Suite 4 El Monte, California 91731 David Baker Lordstown Motors, Corp. 38555 Hills Tech Drive Farmington Hills, MI 48331

August 29, 2022

Dear Mr. Lyons,

Subject: Request for Executive Order - Lordstown Motors 2023 Test Group-PLEVT00.07NY

Lordstown Motors, Corp. requests that ARB issue an executive order for the subject test group. Attached is the Part 1 Application for Certification for the 2023 model year battery electric powered light-duty trucks (LDT4) contained in Lordstown Motors 50 state (Federal/CA) test group.

Lordstown Motors believes that the test group complies with all applicable regulations contained within 40 C.F.R. Parts 85, 86, and 600 and the applicable California Amendments of the EPA regulations it has incorporated and Title 13 of the California Code of Regulations. This test group complies with Federal Tier 3 Bin O and California ZEV.

The EPA certificate of conformity for this test group will be forwarded to you when it becomes available.

Your timely review and issuance of the certificate will be greatly appreciated.

David Baker

Sincerely

**Director, Certification and Homologation** 

#### 17.0 California ARB Information, Statements

# 17.1 California Compliance Statements Production Vehicle same as Test Vehicle Statement

The production vehicles represented by this test group will be in all material respects of the same design as those for which vehicle approval is granted.

### 17.2 Labelling Durability Statement

The labeling required pursuant to 40 CFR 86.082-35 and Section 1965, Chapter 3, Title 13 of the California Administrative code and described in Section 10 of this application will conform with the requirements specified in the California Motor Vehicle Tune-Up Label Specifications and is designed to comply with the durability requirements of those specifications.

### 17.3 Drivability Statement

Vehicles for which certification is requested have drivability and performance characteristics that satisfy our customary drivability and performance requirements for vehicles sold in the United States.

## 17.4 Fill Pipe Specifications

Not Applicable

## 17.5 Evaporative Emission Deterioration Program

Not Applicable

## 17.6 Assembly line NMOG / NMHC Factor

Not Applicable

## 17.7 Continuity of Emissions

Not Applicable

#### 17.8 Lubricants

All lubricants to be used in test vehicles comply with applicable regulations. There are no differences between proposed vehicle lubricants and proposed production vehicle lubricants.

#### 17.9 Test Facility and Equipment

The facility and equipment to be used for mileage accumulation and emission testing comply with all applicable regulations.

#### 17.10 Diagnostic Procedures

In the event that unscheduled maintenance is required on one of the certification test vehicles might become necessary, Lordstown Motors uses the service diagnostic system.

- 17.11 Procedures for Evaluating Drivability
- 17.12 Alternate Procedure
- 17.13 Blanket Approval List

## 17.14 Fuel Economy and Environment Label

Lordstown Motors affixes the Federal Fuel Economy and Environment Label in accordance with 40 CFR Parts 85, 86, and 600 as promulgated on July 6, 2011 (in lieu of CA EP Labels)

## 17.15 Projected Sales

# 17.16 Certification Short Test (CST), High Altitude Testing and Idle CO Testing

# 17.17 Method for Calculation of CO2 Equivalent Value & GHG score

California ZEV Credits

ZEV Credit = (0.01) \* (UDDS range) + 0.50 Must have at least 50 miles range. Maximum of 4.00 credits per ZEV.

## 17.18 Compliance Fee Final Invoice

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CALIFORNIA ARE RESOURCES BOARD
MOBILE SOURCE CERTIFICATION AND COMPLIANCE FEE PAYMENT FORM FOR ON-ROAD APPLICATIONS ONLY

#### CARB USE ONLY

Invoice Name	MSF220161
Invoice Date	Sep21,2022

#### COMPANY INFORMATION

Company Name	Lordstown EV Corporation
Address	2300 Hallock-Young Rd
City	Lordstown
State	Ohio
Zip	44481
Country	Unrted States
Contact Name	Rebecca Hoober
Contact Telephone Number	9544156556
Contact Email	rebecca.hoober@k>rdstownmotors_com
CARB Customer Number	CCF000557

#### APPLICATION INFORMATION

Payment Row Number	Product Description or File Name	Model Year/Calendar Year	Unique Application Identifier: Test Group, Engine Family, Trailer Family, Vehicle Family, ZEP Family, fi applicable (ID listed in payment row must match the unique identifier given to the certification application)	Category Type	Fee Type	Amount
1	CBI PLEVT00.07NY APPIPT1	Model Year 2023	PLEVT00.07NY	Light- <luty and="" group="" group<="" medium-duty="" td="" test="" vehicle="" vehide=""><td>Zer0-Emission</td><td>\$11,627.00</td></luty>	Zer0-Emission	\$11,627.00

Total Due! \$11,627.001

\_, attest that any information provided is true, accurate, and complete